Lignans and chronic diseases: results from the PREDIMED trial

Tresserra-Rimbau A[1,2*], Estruch R[2,3], Martínez-González MA [2,4,5], Fitó M [2,6], Corella D[2,7], Salas-Salvadó J[2,8], Guasch-Ferré M[10], Rimm EB[9,10], Lamuela-Raventós RM[1,2], on behalf of the PREDIMED Study Investigators

[1]Department of Nutrition, Food Science and Gastronomy, XaRTA, INSA-UB, School of Pharmacy and Food Science, University of Barcelona, Barcelona, Spain.
[2]CIBEROBN Fisiopatología de la Obesidad y Nutrición, Instituto de Salud Carlos III, Government of Spain.
[3]Department of Internal Medicine, Hospital Clínic, IDIBAPS, University of Barcelona, Barcelona, Spain.
[4]Department of Preventive Medicine and Public Health, School of Medicine, University of Navarra, Pamplona, Spain.
[5]IdiSNA, Navarra Institute for Health Research, Pamplona, Spain.
[6]Cardiovascular Risk and Nutrition Research Group (CARIN, Regicor Study Group), IMIM (Hospital del Mar Medical Research Institute), Barcelona, Spain.
[7]Department of Epidemiology, Preventive Medicine and Public Health, School of Medicine, University of Valencia, Valencia, Spain.
[8]Human Nutrition Unit, University Hospital of Sant Joan de Reus, Department of Biochemistry and Biotechnology, Faculty of Medicine and Health Sciences, IISPV, Rovira i Virgili University, Reus, Spain.
[9]Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA.
[10]Departments of Nutrition and Epidemiology, Harvard School of Public Health, Boston, MA, USA.
*Presenting author

Background and objectives:

Lignans are phenolic compounds found in olive oil, whole grains and seeds, among others. A healthy lifestyle and a healthy diet can reduce the risk of chronic diseases, which are a worldwide burden.

The objective was to prospectively evaluate the association between lignan intake and the incidence of chronic diseases within the PREDIMED study (ISRCTN 35739639), which includes 7,447 participants at high cardiovascular risk that were followed a median of 4,8 years.

Methodology:

Dietary intake of lignans was obtained from yearly food frequency questionnaires using the Phenol-explorer database. Time-dependent Cox proportional hazard models were used to estimate hazard ratios (HR) and 95% confidence intervals (CI) for chronic diseases and mortality according to lignan intake. Statistical analyses were conducted by using SAS software, version 9.3.

Results and conclusions:

After multivariate adjustment and comparing the highest versus the lowest categories, lignan intake was inversely associated with cardiovascular events (HR=0.51, 95% CI 0.30-0.86, P-lineal=0.007), incidence of type 2 diabetes (HR=0.71, 95% CI 0.51-0.98, P-lineal=0.05), and all cause mortality (HR=0.60, 95% CI 0.37-0.97, P-lineal=0.03). In this population, olive oil was the main source of lignans (72%).

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